SEQUENCE LISTING

<110> ONCOTHERAPY SCIENCE, INC.
JAPAN AS REPRESENTED BY THE PRESIDENT OF THE UNIVERSITY OF TOKYO

<120> METHOD OF DIAGNOSING COLON AND GASTRIC CANCERS

<130> ONC-A0209P

<150> US 60/407,338

<151> 2002-08-30

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<170> PatentIn version 3.1

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<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Ser Asp Leu Pro Leu Arg Phe Pro Tyr Gly Arg Pro Glu Phe Leu Gly
35 40 45

Leu Ser Gln Asp Glu Val Glu Cys Ser Ala Asp His Ile Ala Arg Pro
50 55 60

Ile Leu Ile Leu Lys Glu Thr Arg Arg Leu Pro Trp Ala Thr Gly Tyr
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Ala Glu Val Ile Asn Ala Gly Lys Ser Thr His Asn Glu Asp Gln Ala
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Ser Cys Glu Val Leu Thr Val Lys Lys Lys Ala Gly Ala Val Thr Ser
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Thr Pro Asn Arg Asn Ser Ser Lys Arg Arg Ser Ser Leu Pro Asn Gly
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Glu Gly Leu Gln Leu Lys Glu Asn Ser Glu Ser Glu Gly Val Ser Cys
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His Tyr Trp Ser Leu Phe Asp Gly His Ala Gly Ser Gly Ala Ala Val
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Val Ala Ser Arg Leu Leu Gln His His Ile Thr Glu Gln Leu Gln Asp
165 170 175

Ile Val Asp Ile Leu Lys Asn Ser Ala Val Leu Pro Pro Thr Cys Leu
180 185 190

Gly Glu Glu Pro Glu Asn Thr Pro Ala Asn Ser Arg Thr Leu Thr Arg
195 200 205

Ala Ala Ser Leu Arg Gly Gly Val Gly Ala Pro Gly Ser Pro Ser Thr
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Pro Pro Thr Arg Phe Phe Thr Glu Lys Lys Ile Pro His Glu Cys Leu
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Val Ile Gly Ala Leu Glu Ser Ala Phe Lys Glu Met Asp Leu Gln Ile
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Glu Arg Glu Arg Ser Ser Tyr Asn Ile Ser Gly Gly Cys Thr Ala Leu
260 265 270

Ile Val Ile Cys Leu Leu Gly Lys Leu Tyr Val Ala Asn Ala Gly Asp
275 280 285

Ser Arg Ala Ile Ile Ile Arg Asn Gly Glu Ile Ile Pro Met Ser Ser
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Glu Phe Thr Pro Glu Thr Glu Arg Gln Arg Leu Gln Tyr Leu Ala Phe
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Met Gln Pro His Leu Leu Gly Asn Glu Phe Thr His Leu Glu Phe Pro
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Arg Arg Val Gln Arg Lys Glu Leu Gly Lys Lys Met Leu Tyr Arg Asp
340 345 350

Phe Asn Met Thr Gly Trp Ala Tyr Lys Thr Ile Glu Asp Glu Asp Leu

355 360 365

Lys Phe Pro Leu Ile Tyr Gly Glu Gly Lys Lys Ala Arg Val Met Ala
370 375 380

Thr Ile Gly Val Thr Arg Gly Leu Gly Asp His Asp Leu Lys Val His
385 390 395 400

Asp Ser Asn Ile Tyr Ile Lys Pro Phe Leu Ser Ser Ala Pro Glu Val
405 410 415

Arg Ile Tyr Asp Leu Ser Lys Tyr Asp His Gly Ser Asp Asp Val Leu
420 425 430

Ile Leu Ala Thr Asp Gly Leu Trp Asp Val Leu Ser Asn Glu Glu Val
435 440 445

Ala Glu Ala Ile Thr Gln Phe Leu Pro Asn Cys Asp Pro Asp Asp Pro
450 455 460

His Arg Tyr Thr Leu Ala Ala Gln Asp Leu Val Met Arg Ala Arg Gly
465 470 475 480

Val Leu Lys Asp Arg Gly Trp Arg Ile Ser Asn Asp Arg Leu Gly Ser
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Gly Asp Asp Ile Ser Val Tyr Val Ile Pro Leu Ile His Gly Asn Lys
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Leu Ser

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<211> 1634

<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

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Pro Glu Val Glu Val Cys Leu Phe His Ala Met Leu Gly His Lys Pro
35 40 45

Val Gly Val Asn Arg His Phe His Met Ile Cys Ile Arg Asp Lys Phe
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Ser Gln Asn Ile Gly Arg Gln Val Pro Ser Lys Val Ile Trp Asp His
65 70 75 80

Leu Ser Thr Met Tyr Asp Met Gln Ala Leu His Glu Ser Glu Ile Leu
85 90 95

Pro Phe Pro Asn Pro Glu Arg Asn Phe Val Leu Pro Glu Glu Ile Ile
100 105 110

Gln Glu Val Arg Glu Gly Lys Val Met Ile Glu Glu Glu Met Lys Glu
115 120 125

Glu Met Lys Glu Asp Val Asp Pro His Asn Gly Ala Asp Asp Val Phe
130 135 140

Ser Ser Ser Gly Ser Leu Gly Lys Ala Ser Glu Lys Ser Ser Lys Asp

145 150 155 160

Lys Glu Lys Asn Ser Ser Asp Leu Gly Cys Lys Glu Gly Ala Asp Lys
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Arg Lys Arg Ser Arg Val Thr Asp Lys Val Leu Thr Ala Asn Ser Asn
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Pro Ser Ser Pro Ser Ala Ala Lys Arg Arg Arg Thr
195 200

<210> 5

<211> 1681

<212> DNA

<213> Homo sapiens

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<211> 413

<212> PRT

<213> Homo sapiens

<400> 6

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35 40 45

Gln Thr Asp Ile Pro Pro Asp Val Asp Thr Glu Gln Asp Arg Val Phe
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Phe Ile Lys Ala Ile Ala Gln Phe Met Ala Thr Lys Ala His Ile Lys
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Leu Asn Thr Lys Lys Leu Tyr Gln Ala Asp Gly Tyr Ala Val Lys Glu
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Leu Leu Lys Ile Thr Ser Val Leu Tyr Asn Ala Met Lys Thr Lys Gly
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Met Glu Gly Ser Glu Ile Val Glu Glu Asp Val Asn Lys Phe Lys Phe
115 120 125

Asp Leu Gly Ser Lys Ile Ala Asp Leu Lys Ala Ala Arg Gln Leu Ala
130 135 140

Ser Glu Ile Thr Ser Lys Gly Ala Ser Leu Tyr Asp Leu Leu Gly Met
145 150 155 160

Glu Val Glu Leu Arg Glu Met Arg Thr Glu Ala Ile Ala Arg Pro Leu
165 170 175

Glu Ile Asn Glu Thr Glu Lys Val Met Arg Ile Ala Ile Lys Glu Ile
180 185 190

Leu Thr Gln Val Gln Lys Thr Lys Asp Leu Leu Asn Asn Val Ala Ser
195 200 205

Asp Glu Ala Asn Leu Glu Ala Lys Ile Glu Lys Arg Lys Leu Glu Leu
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Glu Arg Asn Arg Lys Arg Leu Glu Thr Leu Gln Ser Val Arg Pro Cys
225 230 235 240

Phe Met Asp Glu Tyr Glu Lys Thr Glu Glu Glu Leu Gln Lys Gln Tyr
245 250 255

Asp Thr Tyr Leu Glu Lys Phe Gln Asn Leu Thr Tyr Leu Glu Gln Gln
260 265 270

Leu Glu Asp His His Arg Met Glu Gln Glu Arg Phe Glu Glu Ala Lys
275 280 285

Asn Thr Leu Cys Leu Ile Gln Asn Lys Leu Lys Glu Glu Glu Lys Arg
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Leu Leu Lys Ser Gly Ser Asn Asp Asp Ser Asp Ile Asp Ile Gln Glu
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Asp Asp Glu Ser Asp Ser Glu Leu Glu Glu Arg Arg Leu Pro Lys Pro
325 330 335

Gln Thr Ala Met Glu Met Leu Met Gln Gly Arg Pro Gly Lys Arg Ile
340 345 350

Val Gly Thr Met Gln Gly Gly Asp Ser Asp Asp Asn Glu Asp Ser Glu
355 360 365

Glu Ser Glu Ile Asp Met Glu Asp Asp Asp Asp Glu Asp Asp Asp Leu
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Arg Lys Ser Glu Pro Leu Asp Glu Ser Asp Asn Asp Phe

405 410

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<211> 733

<212> DNA

<213> Homo sapiens

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ctgagtgact gtaaattgca gaaccaactt gagaagcttg gattttcacc tggcccaata 180

ctactggcct gaggcttcca ccactaaacg caaagctgta gatacctatt gcttggatta 240

taagccttcc aagggaagaa ggtgggctgc aagagcacca agcaccagaa tcacatatgg 300

gactatcacc aaagagagag actactgcgc ggaagaccag actatcgaga gctggagaga 360

agaaggtttc ccagtgggct tgaagcttgc tgtgcttggt attttcatca ttgtggtgtt 420

tgtctacctg actgtggaaa ataagtcgct gtttggttaa gtaatttagg agcaaagcaa 480

tgctccaagc gaggcctcct gcttcaggaa agaaccaaaa cactaccctg aagggccagc 540

ctagcctgca gccctccctt gcagggagcc ttcccttgca ctgtgctgct ctcacagatc 600

ggtgtctggg ctcagccagg tggaaggaac ctgcctaacc aggcacctgt gttaagagca 660

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gcaggcgtca aac 733

<210> 8

<211> 29

<212> PRT

<213> Homo sapiens

<400> 8

Met Val Asp Val Lys Cys Leu Ser Asp Cys Lys Leu Gln Asn Gln Leu
1 5 10 15

Glu Lys Leu Gly Phe Ser Pro Gly Pro Ile Leu Leu Ala
20 25

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<211> 656

<212> DNA

<213> Homo sapiens

<400> 9

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ctgagtgact gtaaattgca gaaccaactt gagaagcttg gattttcacc tggcccaata 180

ctacgtgggc tgcaagagca ccaagcacca gaatcacata tgggactatc accaaagaga 240

gagactactg cgcggaagac cagactatcg agagctggag agaagaaggt ttcccagtgg 300

gcttgaagct tgctgtgctt ggtattttca tcattgtggt gtttgtctac ctgactgtgg 360

aaaataagtc gctgtttggt taagtaattt aggagcaaag caatgctcca agcgaggcct 420

cctgcttcag gaaagaacca aaacactacc ctgaagggcc agcctagcct gcagccctcc 480

cttgcaggga gccttccctt gcactgtgct gctctcacag atcggtgtct gggctcagcc 540

aggtggaagg aacctgccta accaggcacc tgtgttaaga gcatgatggt taggaaatcc 600

cccaagtcat gtcaactctc attaaaggtg cttccatatt tgagcaggcg tcaaac 656

<210> 10

<211> 67

<212> PRT

<213> Homo sapiens

<400> 10

Met Val Asp Val Lys Cys Leu Ser Asp Cys Lys Leu Gln Asn Gln Leu
1 5 10 15

Glu Lys Leu Gly Phe Ser Pro Gly Pro Ile Leu Arg Gly Leu Gln Glu
20 25 30

His Gln Ala Pro Glu Ser His Met Gly Leu Ser Pro Lys Arg Glu Thr
35 40 45

Thr Ala Arg Lys Thr Arg Leu Ser Arg Ala Gly Glu Lys Lys Val Ser
50 55 60

Gln Trp Ala
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<211> 3707

<212> DNA

<213> Homo sapiens

<400> 11

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cctcaggaaa tggagtccat ctccgcggcg ccggaggagg gcgagagaag gggtcggtgg 180

gcgcagttcc ttctggcacc agtcccggag gagtcgcgac cacggcggct gcagggagca 240

ggcacagccc cgcaggatcc caagccctgc agactaccgc agccagcgag ctaatgtctc 300

agaaaaaatt tgaagaaatc aagaaagcta accaagctgc agccagaaaa cttgttgaag 360

aacagtttag ctcttcatct gaagaaggag atgaagattt tgaaggaaaa cagggaaaaa 420

tacttgcaaa tacgtttata acatacacta ctcagacaga tggagataca cgtgaattag 480

agcgaacaaa acaatatgta aatgaagctt ttcaagcagg ggctatgaca tgcctaattt 540

gtattgcttc ggtgaagaga aaccaagcag tttggagctg ttcgggatgt ttctgtatat 600

ttcacatgcc ctgtatccag aagtgggcta aagacagcca gtttcttgta tcttctgtga 660

ctgatgatga ttttggaaag aaagattgtc cctggccttg tccaaaatgt aggtttgaat 720

acaaacgatc tgaaacacct agtaggtact attgctattg tggaaaagta gaagatccac 780

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ccaaggaatg gtcttgtcag ctgccatgtg gacagaagtt gctttgtggg caacataagt 1020

gtgaaaatcc ttgtcatgca ggaagctgtc agccttgtcc aagagttagt agacaaaagt 1080

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gaaagtgttg ccctggaaac tgtccacctt gtgatcaaaa ctgtggacgg actttaggat 1560

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aaaaagtttt ggagaaatgt ggtcacttgt gtcctgctcc gtgtcatgat caagcgttaa 1860

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gcctgtatgt ggaatgtaga aaaataacca cagctgatgt aaatgaaaag aacctcctca 2340

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gtcatcctgg tgaatgtccc tttaactgca accagaaggt aaaacttaga tgtccttgta 2460

aaagaataaa aaaggaattg cagtgcaaca aagtacgtga aaatcaggtt tcaatagaat 2520

gtgacacaac gtgcaaggaa atgaagcgga aagcatctga gataaaagaa gcagaagcca 2580

aagctgctct tgaagaagaa aaacgaagac aacaggctga actagaagct tttgaaaaca 2640

gactgaaggg tcgtcggaag aagaacagga aaagagatga agtggcagtt gagctatcac 2700

tatggcaaaa acataaacat tatctcattt cagtgtgtgg agttgtggtt gtagtgtttg 2760

cctggtacat cacccatgat gtcaattaaa aaaagttttg atcttttaat gtaactcaga 2820

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atgatagagt acttttcttg ttaccgttaa ctttgtgctt tttaaaaaaa gtgattctct 3240

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agtgaggaat ttttatcaat aaatgtcatg gggcgtgttc ttcagaatat atagttattt 3360

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aaatagagaa atatcagtaa gtcaaatctg tttgaattat aattcctttc aaatagtttt 3660

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<212> PRT

<213> Homo sapiens

<400> 12

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Gly Arg Ala Thr Ala Ala Pro Ser Gly Asn Gly Val His Leu Arg Gly
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Ala Gly Gly Gly Arg Glu Lys Gly Ser Val Gly Ala Val Pro Ser Gly
35 40 45

Thr Ser Pro Gly Gly Val Ala Thr Thr Ala Ala Ala Gly Ser Arg His
50 55 60

Ser Pro Ala Gly Ser Gln Ala Leu Gln Thr Thr Ala Ala Ser Glu Leu
65 70 75 80

Met Ser Gln Lys Lys Phe Glu Glu Ile Lys Lys Ala Asn Gln Ala Ala
85 90 95

Ala Arg Lys Leu Val Glu Glu Gln Phe Ser Ser Ser Ser Glu Glu Gly
100 105 110

Asp Glu Asp Phe Glu Gly Lys Gln Gly Lys Ile Leu Ala Asn Thr Phe
115 120 125

Ile Thr Tyr Thr Thr Gln Thr Asp Gly Asp Thr Arg Glu Leu Glu Arg
130 135 140

Thr Lys Gln Tyr Val Asn Glu Ala Phe Gln Ala Gly Ala Met Thr Cys
145 150 155 160

Leu Ile Cys Ile Ala Ser Val Lys Arg Asn Gln Ala Val Trp Ser Cys
165 170 175

Ser Gly Cys Phe Cys Ile Phe His Met Pro Cys Ile Gln Lys Trp Ala
180 185 190

Lys Asp Ser Gln Phe Leu Val Ser Ser Val Thr Asp Asp Asp Phe Gly
195 200 205

Lys Lys Asp Cys Pro Trp Pro Cys Pro Lys Cys Arg Phe Glu Tyr Lys
210 215 220

Arg Ser Glu Thr Pro Ser Arg Tyr Tyr Cys Tyr Cys Gly Lys Val Glu
225 230 235 240

Asp Pro Pro Leu Asp Pro Trp Leu Val Pro His Ser Cys Gly Gln Val

245 250 255

Cys Glu Arg Glu Phe Lys Pro Pro Cys Gly His Lys Cys Leu Leu Leu
260 265 270

Cys His Pro Gly Pro Cys Pro Pro Cys Pro Lys Met Val Thr Thr Thr
275 280 285

Cys Tyr Cys Lys Lys Ala Lys Pro Ile Pro Arg Arg Cys Ser Ala Lys
290 295 300

Glu Trp Ser Cys Gln Leu Pro Cys Gly Gln Lys Leu Leu Cys Gly Gln
305 310 315 320

His Lys Cys Glu Asn Pro Cys His Ala Gly Ser Cys Gln Pro Cys Pro
325 330 335

Arg Val Ser Arg Gln Lys Cys Val Cys Gly Lys Lys Val Ala Glu Arg
340 345 350

Ser Cys Ala Ser Pro Leu Trp His Cys Asp Gln Val Cys Gly Lys Thr
355 360 365

Leu Pro Cys Gly Asn His Thr Cys Glu Gln Val Cys His Val Gly Ala
370 375 380

Cys Gly Glu Cys Pro Arg Ser Gly Lys Arg Phe Cys Pro Cys Gln Lys
385 390 395 400

Ser Lys Phe Ser Leu Pro Cys Thr Glu Asp Val Pro Thr Cys Gly Asp
405 410 415

Ser Cys Asp Lys Val Leu Glu Cys Gly Ile His Arg Cys Ser Gln Arg
420 425 430

Cys His Arg Gly Pro Cys Glu Thr Cys Arg Gln Glu Val Glu Lys His
435 440 445

Cys Arg Cys Gly Lys His Thr Lys Arg Met Pro Cys His Lys Pro Tyr
450 455 460

Leu Cys Glu Thr Lys Cys Val Lys Met Arg Asp Cys Gln Lys His Gln
465 470 475 480

Cys Arg Arg Lys Cys Cys Pro Gly Asn Cys Pro Pro Cys Asp Gln Asn
485 490 495

Cys Gly Arg Thr Leu Gly Cys Arg Asn His Lys Cys Pro Ser Val Cys
500 505 510

His Arg Gly Ser Cys Tyr Pro Cys Pro Glu Thr Val Asp Val Lys Cys
515 520 525

Asn Cys Gly Asn Thr Lys Val Thr Val Pro Cys Gly Arg Glu Arg Thr
530 535 540

Thr Arg Pro Pro Lys Cys Lys Glu Gln Cys Ser Arg Pro Pro Thr Cys
545 550 555 560

His His Thr Ser Gln Glu Lys His Arg Cys His Phe Gly Ser Cys Pro
565 570 575

Pro Cys His Gln Pro Cys Gln Lys Val Leu Glu Lys Cys Gly His Leu
580 585 590

Cys Pro Ala Pro Cys His Asp Gln Ala Leu Ile Lys Gln Thr Gly Arg
595 600 605

His Gln Pro Thr Gly Pro Trp Glu Gln Pro Ser Glu Pro Ala Phe Ile
610 615 620

Gln Thr Ala Leu Pro Cys Pro Pro Cys Gln Val Pro Ile Pro Met Glu
625 630 635 640

Cys Leu Gly Lys His Glu Val Ser Pro Leu Pro Cys His Ala Val Gly
645 650 655

Pro Tyr Ser Cys Lys Arg Val Cys Gly Arg Ile Leu Asp Cys Gln Asn

660 665 670

His Thr Cys Met Lys Glu Cys His Lys Val Thr Lys Thr Asp Gly Cys
675 680 685

Thr Gly Lys Asn Lys Ala Gly Pro Glu Cys Leu His Cys Glu Glu Gly
690 695 700

Cys Ser Lys Ser Arg Pro Leu Gly Cys Leu His Pro Cys Ile Leu Arg
705 710 715 720

Cys His Pro Gly Glu Cys Pro Pro Cys Val Gln Met Leu Arg Ile Lys
725 730 735

Cys His Cys Lys Ile Thr Ser Leu Tyr Val Glu Cys Arg Lys Ile Thr
740 745 750

Thr Ala Asp Val Asn Glu Lys Asn Leu Leu Ser Cys Cys Lys Asn Gln
755 760 765

Cys Pro Lys Glu Leu Pro Cys Gly His Arg Cys Lys Glu Met Cys His
770 775 780

Pro Gly Glu Cys Pro Phe Asn Cys Asn Gln Lys Val Lys Leu Arg Cys
785 790 795 800

Pro Cys Lys Arg Ile Lys Lys Glu Leu Gln Cys Asn Lys Val Arg Glu
805 810 815

Asn Gln Val Ser Ile Glu Cys Asp Thr Thr Cys Lys Glu Met Lys Arg
820 825 830

Lys Ala Ser Glu Ile Lys Glu Ala Glu Ala Lys Ala Ala Leu Glu Glu
835 840 845

Glu Lys Arg Arg Gln Gln Ala Glu Leu Glu Ala Phe Glu Asn Arg Leu
850 855 860

Lys Gly Arg Arg Lys Lys Asn Arg Lys Arg Asp Glu Val Ala Val Glu
865 870 875 880

Leu Ser Leu Trp Gln Lys His Lys His Tyr Leu Ile Ser Val Cys Gly
885 890 895

Val Val Val Val Val Phe Ala Trp Tyr Ile Thr His Asp Val Asn
900 905 910

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<211> 21

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<400> 16

acaacacttg gtagcagcct t 21

<210> 17

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<400> 17

ctctaacaga cctcttaaat tgtg 24

<210> 18

<211> 22

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<400> 18

catagaccca taagccctgt tg 22

<210> 19

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<210> 21

<211> 23

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<400> 21

tgtggtgttt gtctacctga ctg 23

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<400> 23

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<210> 24

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<220>

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<400> 24

gtcattgtca ctctcatcca g 21

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<400> 27

cttgttgatg tgggtcacac g 21

<210> 28

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<211> 20

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<400> 31

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<210> 32

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<400> 32

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<210> 33

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<210> 36

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<210> 37

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<210> 38

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<400> 38

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<210> 39

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<210> 40

<211> 32

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<212> DNA

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<211> 32

<212> DNA

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aagctcgaga agtcattgtc actctcatcc ag 32

<210> 44

<211> 30

<212> DNA

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<400> 44

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<210> 45

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<210> 46

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<212> DNA

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<211> 30

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<210> 48

<211> 28

<212> DNA

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<210> 49

<211> 28

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aagctcgagg cagacacgta aggtggcg 28

<210> 50

<211> 16

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<400> 50

gtgagcatat tactcc 16

<210> 51

<211> 16

<212> DNA

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<400> 51

cctcattata cgagtg 16

<210> 52

<211> 18

<212> DNA

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<220>

<223> Artificially synthesized S-oligonucleotide

<400> 52

ggccagggac aatctttc 18

<210> 53

<211> 18

<212> DNA

<213> Artificial

<220>

<223> Artificially synthesized S-oligonucleotide

<400> 53

ctttctaaca gggaccgg 18

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gcccacctcg gcctctcc 18

<210> 55

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cctctccggc tccacccg 18

<210> 56

<211> 18

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<400> 56

cacctcggcc tctcccat 18

<210> 57

<211> 18

<212> DNA

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<223> Artificially synthesized S-oligonucleotide

<400> 57

taccctctcc ggctccac 18

<210> 58

<211> 18

<212> DNA

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<400> 58

atccaccatg atgataga 18

<210> 59

<211> 18

<212> DNA

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<223> Artificially synthesized S-oligonucleotide

<400> 59

agatagtagt accaccta 18

<210> 60

<211> 18

<212> DNA

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<223> Artificially synthesized S-oligonucleotide

<400> 60

acacttcaca tccaccat 18

<210> 61

<211> 18

<212> DNA

<213> Artificial

<220>

<223> Artificially synthesized S-oligonucleotide

<400> 61

taccacctac acttcaca 18

<210> 62

<211> 18

<212> DNA

<213> Artificial

<220>

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<210> 106

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<210> 109

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<210> 110

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<210> 112

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<210> 113

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<210> 114

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<210> 118

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ggagatgaag attttgaagt 20

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gaagaacagg aaaagagatt 20

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ccagaaggta aaacttagat 20

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gcgactagag actctgcagt 20

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